

**REMARKS**

Entry of the foregoing amendments is respectfully requested. New claims 36-41 have been added. Claims 2, 3, 5-13, and 36-41 are currently pending in the application. Favorable reconsideration and allowance of this application is respectfully requested in light of the foregoing amendments and the remarks that follow.

**I. Rejections Based on Prior Art**

**A. Claims 2, 3, 6, 7, 12, and 13**

In the Office Action, the Examiner has rejected claims 2, 3, 6, 7, 12, and 13 under 35 U.S.C. §102(e) as being anticipated by Davydov et al., U.S. Patent No. 6,585,863 (the '863 patent).

Applicant respectfully traverses the Examiner's rejection to claims 2, 3, 6, 7, 12, and 13 based on the '863 patent. More specifically, claim 7 requires that the filter material include an ordered filter media and an additive impregnated into the filter media. Claim 7 goes on to state that the additive impregnated into the filter media is capable of bonding to the contaminant that is to be removed by the filter material.

In contrast, the '863 patent discusses a mesoporous material on which are loaded photocatalysts for the catalytic degradation of organic compounds or contaminants in an aqueous liquid or gaseous fluid. Thus, the material as disclosed includes a transition metal exchanged into the material, which can be iron oxide, as well as a photoactive semiconductor, such as titanium dioxide subsequently loaded onto the material to form the photocatalyst. Neither the transition metal nor the photoactive semiconductor in the photocatalyst is capable of bonding to the contaminant as required by claim 7. Particularly, the organic contaminants treated by the catalyst of the '863 patent are oxidized or otherwise reacted with the catalyst formed of the mesoporous material, the transition metal, and the titanium dioxide, which is highly different from bonding or adsorbing the contaminant onto the additive as required by claim 7. As a result, while the Examiner states that the intended use of the material to remove arsenic from the fluid is not a product limitation, the ability of the additive impregnated into the material to bond with the contaminant as opposed to react with or degrade the contaminant is a product limitation which patentably distinguishes claim 7 from the '863 patent. Therefore, the subject matter of claim 7 is neither shown nor described by the '863 patent, such that claim 7 is allowable. Furthermore,

claims 2, 3, 6, 12, and 13 that depend from claim 7 are also allowable based on their dependency from claim 7. Applicant therefore respectfully requests that the Examiner withdraw the rejection to claims 2, 3, 6, 7, 12, and 13.

B. Claims 5, 8, and 9

In the Office Action, the Examiner has also rejected claims 5, 8, and 9 under 35 U.S.C. §103(a) as being unpatentable over the '863 patent.

Applicant respectfully traverses the Examiner's rejection of claims 5, 8, and 9 based on the '863 patent. More specifically, each of claims 5, 8, and 9 depend from claim 7 which, as discussed previously, is allowable. Therefore, claims 5, 8, and 9 are also allowable based on their dependency from claim 7, such that Applicant respectfully requests that the Examiner withdraw the rejection to claim 5, 8, and 9.

C. Claims 10 and 11

In the Office Action, the Examiner has rejected claims 10 and 11 under 35 U.S.C. §103(a) as being unpatentable over the '863 patent in view of Baker et al., U.S. Patent No. 6,706,194 (the '194 patent).

Applicant respectfully traverses the Examiner's rejections to claims 10 and 11 based on the '863 and '194 patents. More specifically, claims 10 and 11 depend from claim 7, which, as discussed previously, is allowable. Therefore, Applicant believes that claims 10 and 11 also are allowable and respectfully requests that the Examiner withdraw the rejections to claims 10 and 11.

**II. New Claims 36-41**

With this response, Applicant has also amended new claims 36-41 to the application. New claim 36 is allowable as new claim 36 depends directly from claim 7 and specifies that the additive impregnated into the filter media is capable of absorbing the contaminant onto the additive, further specifying the type of bonding occurring between the additive and the contaminant initially recited in claim 7.

New claim 37 describes a method for forming the filter material similar in scope to withdrawn claim 18 in which the method includes the steps of forming the ordered filter media as an ordered mesoporous silica molecular sieve, and impregnating an additive capable of bonding the contaminant to be removed from the fluid stream to the additive in the ordered filter

media. Based on the Examiner's comments concerning the withdrawal of the claims of Group II, which included claim 18, and, in particular, the statement that the process covered by these claims could be used to make a non-silica mesoporous molecular sieve, claim 37 is believed to be in proper form for incorporation with this application as the claim is directed toward a method of forming a filter material including the step of forming an ordered filter media as an ordered mesoporous silica molecular sieve. Furthermore, claim 37 is allowable as the method further includes the step of impregnating an additive capable of bonding to the contaminant to be removed from the fluid stream to the additive, similarly to allowable claim 7. New claims 38-41 depend from claim 37 and further limit the method of claim 37 and are allowable based on their dependency from claim 37.

#### CONCLUSION

It is submitted that claims 2, 3, 5-13, and 36-41 are in compliance with 35 U.S.C. §§102 and 103 and each define patentable subject matter. A Notice of Allowance is therefore respectfully requested.

No fees are believed to be payable with this communication. Nevertheless, should the Examiner consider any other fees to be payable in conjunction with this or any future communication, the director is authorized to charge any fee or credit any overpayment to Deposit Account No. 50-1170.

The Examiner is invited to contact the undersigned by telephone if it would help expedite the prosecution and allowance of this application.

Respectively submitted,



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